

**Claims:**

1. Optical fiber cable comprising:

(a) an optical fiber bundle comprising a plurality of longitudinally extending optical fibers,

5 (b) an encasement having an essentially circular cross section encasing the plurality of longitudinally extending optical fibers.

2. The optical fiber cable of claim 1 wherein the encasement is a polymer having an elastic modulus greater than 210 MPa at 23 °C.

10

3. The optical fiber cable of claim 1 wherein the optical fiber bundle is selected from the group consisting essentially of:

a. 2 – 20 optical fibers randomly arranged, and

15 b. at least one optical fiber ribbon of at least 3 optical fibers, the optical fibers having centers c, with the centers c lying on a common axis.

4. The optical fiber cable of claim 1 wherein the shrinkage of the optical fiber cable as measured by heating to 85 °C is less than 40% of the shrinkage of the material forming the encasement as measured by heating to 85 °C

20

5. The optical fiber cable of claim 2 wherein the shrinkage of the optical fiber cable as measured by heating to 85 °C is less than 20% of the shrinkage of the material forming the encasement as measured by heating to 85 °C

6. The optical fiber cable of claim 1 additionally including an additional polymer layer over the encasement.

7. The optical fiber cable of claim 6 wherein the additional polymer layer has an elastic modulus greater than that of the primary encasement.

8. The optical fiber cable of claim 1 wherein the minimum thickness of the encasement layer is in the range 3-15 mils.

9. The optical fiber cable of claim 1 wherein the encasement is low-density polyethylene.

10. The optical fiber cable of claim 3 wherein the optical fiber bundle comprises 2-20 randomly arranged fibers.

11. The optical fiber cable of claim 3 wherein the optical fiber bundle comprises at least 3 optical fibers with centers c on a common axis.

12. The optical fiber cable of claim 10 wherein each of the optical fibers is coated with an optical fiber coating, and the encasement contacts the optical fiber coating.

13. The optical fiber cable of claim 11 wherein the optical fiber bundle has a

ribbon coating to form an optical fiber ribbon and the encasement contacts the ribbon coating.

14. The optical fiber cable of claim 13 comprising a plurality of stacked optical  
5 fiber ribbons.

15. The optical fiber cable of claim 3 wherein the encasement is essentially void-free.

10 16. The optical fiber cable of claim 15 wherein each optical fiber in the 2-20 optical fibers bundle essentially contacts no more than two other optical fibers.